
FUEL CHEMISTRY NEWS

Newsletter of the ACS Division of Fuel Chemistry

Volume 82, No. 1

<http://www.anl.gov/PCS/acsfuel/>

Summer 2003

Message from the Chair (James Franz)



2003 has been a great year for the Fuel Chemistry Division, with a successful Spring meeting in New Orleans and an exciting meeting shaping up for the Fall New York City meeting. The onset of the Iraq war prior to the New Orleans meeting led to cancellation of travel and much added effort on the part of Chunshan Song to cover for missing organizers and contributors. In spite of the disruptions, the New Orleans Fuel Chemistry Symposia presented nearly 240 papers, with high quality symposia in notably timely current areas, including Hydrogen Energy for the 21st Century, Advances in CO₂ Capture and Conversion & Utilization, and state of the art scientific developments in HDS and HDN catalysis (“Environmental Catalysis by Metal Sulfides, Carbides and Nitrides for Ultraclean Fuels”). Our congratulations go out to Chunshan Song for one of the most successful program years in the history of the Fuel Division.



Ekrem Ozdemir (l.) receiving a Glenn Award Plaque from Jim Franz (Chair) at the Joint Fuel-Petroleum Division dinner (New Orleans)

The New Orleans technical program was capped by a most enjoyable joint Fuel-Petroleum Division dinner at Arnaud's in New Orleans. Thanks go to the Restek Corporation for its contribution to the costs of the dinner.

The financial state of the Division has been affected by the stock market contraction and other costs, providing extra impetus to reduce costs of operation of the Division. The state of the Division finances affects decisions in areas such as funding for the Division Outreach program, and for contributions to activities like the Gordon Conference on Hydrocarbon Resources and other discretionary activities. A substantial cost reduction in operations was achieved with replacement of the printed Fuel Preprints with the CD version. The online submission process and the high quality of the resulting CD-based Preprints have proven quite satisfactory. (Special thanks go out for the efforts of M. Mercedes Maroto-Valer for the processing of the significantly greater numbers of papers at recent ACS national meetings!) Depending on the response of library subscribers to the CD format, it may be necessary to make the Preprints available on an ACS server for downloading, which will involve greater costs. Several events may provide additional relief to the Division budget picture. First, the recent national ACS election was held to modify the ACS Bylaws to allocate a greater portion of national annual dues to the technical Divisions. If the bylaws changes are passed, it will result in significant relief to the Fuel Division. The Executive Committee has also sought industry support for the Storch Award. Discussions with Elsevier Publications indicate they can provide about 50% of funding of the Storch Award. Finally, the Trust Fund is recovering along with the recent rebound of the stock market. These events in total should help to provide discretionary resources for projects such as the Fuel Division Public Outreach program.

The Fuel Chemistry Division again congratulates Howard Stephens and coworkers for their accomplishments in producing the award-winning "Running on Empty" and "Energy Update" radio documentaries. In 2003, the Fuel Division received notification that Division of Fuel Chemistry public outreach radio programs have received two CINDY Awards presented by presented by the International Association of Audio Visual Communicators (IAAVC), a non-profit group representing theatrical, broadcast, non-broadcast, and interactive media professionals throughout the world.



Howard and Virginia Stephens, co-producers of the Running on Empty and Energy Update Radio Documentaries

"Running on Empty: America's Energy Crisis" a two-hour, four-part documentary on energy in America and America's energy crisis, received top honors with a CINDY Gold Award in the category of "Documentary: Domestic National Broadcast" for Region 6--Southwestern United States (AZ, CA, HI, NV UT, NM) and Mexico. A prototype series of short-format news programs called "The Energy Update," broadcast during 2002 on KUNM FM 89.9, Albuquerque, received a Cindy Silver award for Public Service and Information. The Energy Update series focused on various energy topics, including alternative fuel vehicles, wind and solar energy. "Running on Empty: Americas Energy Crisis" has been updated annually, and distributed and broadcast nationally for three years. Since its original national release in June of 2001, it has been broadcast on over 100 public radio stations in 30 states. In addition to the most recent recognition for excellence in broadcast media by a CINDY Gold award, last year "Running on Empty" received a National Headliner Award from the Press Club of Atlantic City for outstanding broadcast journalism, and a New Mexico Associated Press

Broadcaster's Award. "Running on Empty" and the "Energy Update" were produced, with underwriting by the Division of Fuel Chemistry, by Howard Stephens, past-chair of the Division, his wife, educator and technical writer Virginia Stephens, and veteran media producer Jim Cochran.

Again, it is my distinct pleasure to congratulate Chunshan Song for his unstinting efforts that have brought the Division one of its most successful years in terms of numbers and quality of papers at the New Orleans and New York meetings. We look forward to continuing success of the Fuel Chemistry Division, with involvement in leading timely technical areas such as hydrogen, fuel cells, catalysis, clean fuels and other areas of national importance. We look forward to continued improvement in the public recognition of the Fuel Chemistry Division through public outreach. We urge you to support your Fuel Chemistry Division by active participation in an exciting array of upcoming symposia. Hope to see you in New York City!

James A. Franz
Chair, Division of Fuel Chemistry

Fuel Preprint News (M. Mercedes Maroto-Valer, Editor/Director of Preprints)



These are exciting times for our Fuel Chemistry Preprints. Starting in the Spring 2003 meeting and for the first time, all our preprints have been published in CD format, including for our Division members and institutional subscribers. Our members have been receiving CDs since the Spring'02 meeting. And now, since last Spring'03 meeting and following consultations with other Divisions, our subscribers also receive the Preprints in CD format. The CD format is certainly the preferred publishing media nowadays, and furthermore, their production cost is significantly lower than that of books. However, we will be looking into our institutional subscribers and see whether they are happy with this arrangement.

We continue beating our own record regarding the number of preprints we published. For the Spring'03 meeting in New Orleans, we assembled 228 preprints (an

all-record high!) and now for the coming Fall'03 meeting in New York we have assembled 205 preprints. Congratulations to the Program Chair and all the Symposia Organizers!! However, in order to avoid increasing editing and publishing costs, it is particularly important to remind all the authors that they should carefully follow the template when preparing their preprint. The template and detailed instructions for the authors can be found in the Fuel website:

<http://www.anl.gov/PCS/acsfuel/preprintinfo.html>.

Authors lacking access to the internet or necessary word processing tools should contact their symposium organizer for assistance. Technical issues concerning the preprint template should be directed to my attention. I also want to remind symposium chairs that they need to review the preprints to ensure that they comply with the required format.

I continue getting very good feedback regarding the overall quality of our CD, but I think we still have some room for improvement and I would like to ask your opinion on how we can make a better product. Our current CD contains the preprints as well as Division information (Membership application, Membership benefits, Executive Committee), Newsletter and Fuel Future Symposia 2003 and 2004. In addition, for the coming CD you will notice a couple of additional features/improvements:

(1) Now you can print all the papers in a Symposium with a few key strokes rather than opening each individual file and printing. This is a feature that many of you have requested; and

(2) The text of the footer of our preprints has been changed to reflect how our preprints are cited. Please, check Fuel website for the update template.

Finally, I also want to remind you that all the ACS-Fuel Chemistry Division members have full access to the on-line version of the Fuel Preprints through the ACS website: <http://pubs.acs.org/meetingpreprints/>. This webpage also contains the meetings preprints back to the Spring'01 meeting in San Diego.

Please, do not hesitate to contact me if you have any questions regarding the preprints.

Mercedes Maroto-Valer

Contact information: mmm23@psu.edu, or 814- 863 8265

Online Preprints (Jonathan Mathews; Membership)



Preprints are Online Too!

Just a reminder that there is another way to access Division of Fuel Chemistry's current and past preprints.

Simply go to <http://pubs.acs.org/meetingpreprints/>

Authorization Required

You have requested an item from the ACS Publications Web Server that requires authorization with a User ID and Password.

Please log in to access **FUEL Preprints**

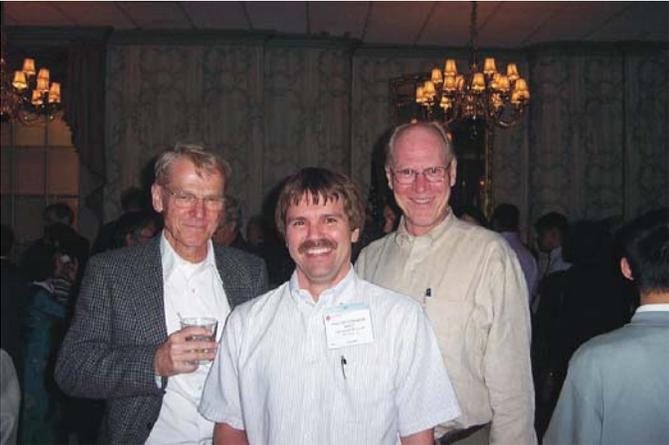
User ID:

Password:

Your ACS membership number is *both* your User ID and password. Preprints online for Fuel Chemistry are available from 2001 onwards.

Lost your membership number? Your ACS membership number can be obtained from ACS member services 800-333-9511 (US only) or via email service@acs.org

*Pictures from the Joint Petroleum/Fuel
Division Dinner (Arnoud's, New Orleans)*



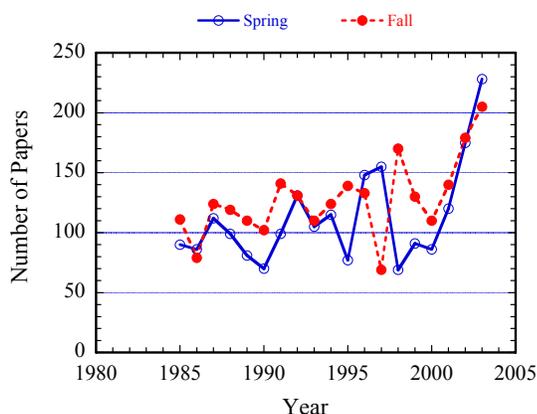
Fall Meeting Deadlines (Marek Wójtowicz; Program Secretary)



Dear ACS Fuel Chemistry Division Members:

The ACS fall meeting is coming up in less than two months, and this is the time of the year when I write to bring you up to date on our programming. Before I do that, however, I wish to

recognize two outstanding individuals who, through their vision and dedication, have strengthened our program beyond anybody's expectations. You have probably guessed that I am talking about Dr. Robert Warzynski, the 2002 Program Chair, and Dr. Chunshan Song, the 2003 Program Chair. I want to share with you a plot showing the number of papers presented before the Division in recent years. The data points for 2002 and 2003 speak for themselves, and the sequence of record-breaking meetings is simply unprecedented. But the strength of the programming is not only the number of papers. It is also their quality, the thoughtful selection of symposium topics, attendance at the meeting, stimulating discussions, it is a number of factors that put together make a meeting truly memorable. Drs. Warzynski and Song have set high standards for all of us, and I wish to thank them for the job well done. On a personal note, I feel greatly privileged to have had the opportunity to work with Bob and Chunshan, and I have certainly learnt from them a lot.



Elsewhere in this newsletter, you will find a summary of the program for the forthcoming meeting in New York City as well as programs for our future meetings.

If you have suggestions for new symposium topics, or would like to co-organize a symposium that is in need of a chairperson, please contact one of the Program Chairs: 2004 – Dr. Semih Eser (seser@psu.edu); 2005 – Dr. Tom Autrey (tom.autrey@pnl.gov); and 2005 – Dr. Robert Hurt (robert_hurt@brown.edu). Please note that we normally try to have 2–4 co-organizers per symposium, and that volunteers and ideas for new symposia are always welcome. For your future reference, an up-to-date program for the Division can always be found on the web at <http://www.anl.gov/PCS/acsfuel/symposia.htm>.

I wish you a great summer, and I look forward to seeing you in New York City.

With best regards,



Marek Wójtowicz
Program Secretary
ACS Division of Fuel Chemistry
marek@AFRinc.com

Councilor's Report – New Orleans (Steve Benson)

As a Councilor for the Fuel Division I participate on the Committee on Environmental Improvement and the ACS Councilors' meetings.

Committee on Environmental Improvement

The vision of the CEI is to promote a global ethic of sustainability and a clean environment. The CEI advise the ACS governing bodies on environmental issues and policy and promote improving human health and the environment. CEI's audience is the chemical enterprise consisting of academic, industrial, and governmental institutions and the chemical professionals that they employ; ACS members and leaders; the public (students, educators, laypersons); and policy makers (Congressional staff, Congress, and the executive branch).

As part of this group I work on a specific area that is focused on the use of efficient and clean energy sources.

During the past meeting I provided background information on the challenges for mercury control at coal-fired utilities. Congress is currently debating if the mercury emission limits will follow the Maximum Achievable Control Technology (MACT) approach or Clear Skies Act.

Challenges for mercury control at coal fired power plants

- Mercury control technology options are dependent upon the form of mercury in the flue gas stream. Oxidized forms are reactive and can be captured using sorbents and scrubbers. Elemental mercury is very difficult to collect and must be oxidized prior to capture.
- Recent results of long-term measurements of total mercury and mercury species conducted at power plants have shown high variability.
- Research and development funding is needed to develop measurement and control technologies.
- Demonstrations of technologies to control emissions of mercury emissions are limited and funding is needed to test control technologies on a wide range of fuel types and boiler configurations.

Currently, there is no single best technology that can be applied broadly to control mercury emissions from coal-fired power plants. Combinations of available control methods may be able to provide up to 90% control for some plants but not for others, depending upon coal type. Lignite and subbituminous coal-fired power plants are faced with the most significant challenge because reliable, demonstrated control technologies for highly unreactive elemental mercury are not commercially available. Only limited short-term tests have been performed to date. Significant research, development, and field testing are required to prepare the electric utility sector for implementation of mercury standards.

Councilors Meeting

The ACS Council was asked to vote on the petition for

Division and Local Section funding. For the Bylaws/Constitution change, a two-thirds vote of Council was required and during the New Orleans meeting the Council voted for the petition. The next step is that the Constitution change will need to be ratified by the membership. This action will increase the level of funding for Divisions.

What's Happening in Fuel Chemistry (David J. Clifford; Newsletter Editor)

Beginning with the Fall 2002 newsletter (last one), I will be offering members of the division the opportunity to highlight newsworthy "happenings". I encourage members to send an email to me at djc175@psu.edu containing a brief description of fuel-related events for the newsletter.

Coal Research Promoted through Consortium for Premium Carbon Products from Coal (CPCPC) (John Andresen; The Pennsylvania State University))



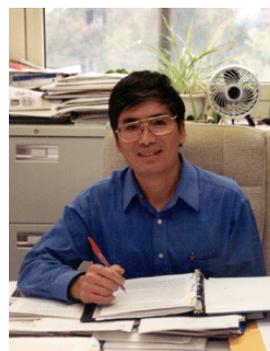
The Consortium for Premium Carbon Products from Coal (CPCPC) directed by Dr. John M. Andresen has since its inception in 1998 established more than \$8.7 million towards over 50 projects working on transforming coal into carbon products. Many of these projects have been carried out by members of the Division of Fuel Chemistry working with industries and academia involved with coal and/or carbon products. The success of CPCPC is closely related to its funding of cutting-edge research and extensive networking between academia and industries.

In June 2003 Senators Specter and Santorum of Pennsylvania announced that the National Energy Technology Laboratory, Department of Energy has directed a \$5 million grant, distributed over a five year period, to Pennsylvania State University to continue the successful operation of CPCPC through the Energy Institute.

Call-for-Papers for ACS Spring 2004 National Meeting

CPCPC has currently close to 50 members with background in the coal and carbon industries. As an industry-driven consortium, CPCPC research is selected and funded based largely on its industrial pertinence. Industry identifies and partially funds projects it feels have the greatest potential for producing competitively priced carbon products from coal or coal-derived feedstocks. Projects are solicited from the CPCPC membership, and each member is eligible to submit proposals and compete for financial supports. The next opportunity for funding is available at the up-coming October 29 and 30 meeting at Penn State University.

Annual membership dues for the CPCPC are \$1,000, with year 2003 dues currently being accepted. For more information on becoming a CPCPC member or on attending one of our semi-annual meetings, please contact John at (814) 865-2484 or e-mail cpcpc@ems.psu.edu. You can also get more information on our website at <http://www.energy.psu.edu/cpcpc>



Dear ACS Members,

On behalf of the ACS Fuel Chemistry Program Committee, I am pleased to report that the FUEL Division will have a strong technical program for the 226th American Chemical Society (ACS) National Meeting in New York City during

September 7-11, 2003.

Thanks to the effective organizing efforts of symposia organizers and the contributions from active researchers worldwide, we will have an exciting program with 205 papers including invited and contributed papers, programmed in both oral and poster sessions. Researchers from 13 countries contributed 205 papers (universities-125, national laboratories-45 and industries-35). The contributions from US and international researchers account for 59.5% and 40.5% of the accepted papers, respectively. The 35 papers contributed by industrial research groups also cover many companies (e.g., Conoco Phillips, Exxon Mobil, Shell, Akzo Nobel, Engelhard, Sud Chemie, Fuel Cell Energy, Millennium Cells, Precision Combustion, Phillips Morris, Osaka Gas, Dow Corning, Idemitsu Kosan, Sinopec-RIPP, HTI, Eltron, Advanced Fuels Research; Niksa Energy Associates, Black Light Power, etc.). Most of the Fuel symposia also have invited lectures by well-known leaders in the related research areas.

There will be three parallel sessions and a total of 28 half-day sessions for 8 symposia starting on Sunday morning-Sept 7 and ending on Thursday afternoon-Sept 11. The program contains the 8 symposia scheduled by FUEL including 3 symposia co-sponsored by other ACS divisions (I&EC; PETR). The outline of the technical program topics and the organizers are listed below.

All the accepted papers in FUEL are scheduled in oral sessions, as will be published in C&EN. The symp organizers and the program committee have worked very hard in order to arrange the technical program in the best possible way while satisfying all the ACS online program requirements [ACS has even programming policy (from Sunday till Thursday); conflict reporting

requirements for authors with two or more papers, preprints requirements, etc. (FYI, we had to reject over 30 ACS abstracts before completing the final program)]. All the authors should be informed on the technical program. ACS provide LCD projector and overhead transparency projector. Authors will need to bring either a CD (or laptop computer) or transparency sheets for your presentation. 20 oral papers have been selected for an additional Sci-Mix poster presentation on Monday evening, which is a great opportunity for presenting research to a broader audience in addition to the oral presentation.

We are grateful to all of the symposium organizers, the invited speakers, and all the contributing authors and contributing division members for your contributions.

We look forward to a successful ACS meeting and seeing you at the ACS New York meeting soon

Chunshan Song
2003 Program Chair
Pennsylvania State University

NATIONAL MEETINGS 2003



Fall 2003
226th ACS National Meeting
September 7-11
New York City

Chunshan Song; 2003 Program Chair

Department of Energy & Geo-Environmental Engineering, and Clean Fuels & Catalysis Program, The Energy Institute, Pennsylvania State University, 206 Hosler Bldg., University Park, PA 16802, USA; Tel: 814-863-4466; Fax: 814-865-3248; E-mail: <csong@psu.edu>

Online submission of the abstract (150-word) and preprint paper (2-pages) by April 11, 2003 via ACS website <<http://oasys.acs.org/oasys.htm>>.

Instructions and template for preprint papers available at <<http://www.anl.gov/PCS/acsfuel/preprintinfo.html>>

Topics and Organizers of Symposium

Fuel Cell Systems and Fuel Processing for Fuel Cell Applications [48 papers / 6 half-day sessions]

Sai Katikaneni, Fuel Cell Energy, 3 Great Pasture Road, Danbury, CT 06813, USA; Tel: (203) 825-6067; Fax: (203) 825-6273; E-mail: <skatikaneni@fce.com>;
Anne M. Gaffney, Rohm and Haas, P.O. Box 904, 727 Norristown Rd., Spring House, PA 19477-0904; Tel: (215) 619-5260, Fax: (215) 619-1625, E-mail: <Anne_Gaffney@RohmHaas.com>;
Chunshan Song, Dept. of Energy & Geo-Environ Eng and Clean Fuels and Catalysis Program, Pennsylvania State Univ, 206 Hosler Bldg., University Park, PA 16802, Tel: 814-863-4466; Fax: 814-865-3248; E-mail: <csong@psu.edu>;
Shabbir Ahmed, Fuel Cell Technology Section, Argonne National Laboratory, 9700 S. Cass Avenue, Bldg. 205, Argonne, IL 60439; Tel: 630/252-4553; E-mail: <ahmed@cmt.anl.gov>

Catalysts and Processes for Ultra-Clean Gasoline and Diesel Fuels. (FUEL will preprint; co-sponsored by

PETR) [47 papers / 6 half-day sessions]
Isao Mochida, Institute of Advanced Material Study, Kyushu University, Kasuga, Fukuoka 816, Japan; Tel: 81-92-583-7797; Fax: 81-92-583-7798; Email: <mochida@cm.kyushu-u.ac.jp>;
Jacob A. Moulijn, Delft University of Technology, Department of Chemical Technology, Section for Industrial Catalysis, Julianalaan 136, 2628 BL Delft, The Netherlands; Tel: +31 (0) 15-278-5008; Fax: +31 (0)15 278 5006; E-mail: <j.a.moulijn@tnw.tudelft.nl>;
Chunshan Song, Dept. of Energy & Geo-Environ Eng and Clean Fuels and Catalysis Program, Pennsylvania State University, 206 Hosler Bldg., University Park, PA 16802, Tel: 814- 863-4466; Fax: 814-865-3248; E-mail: <csong@psu.edu>;
James D. Burrington, The Lubrizol Corporation, 29400 Lakeland Boulevard, Wickliffe, OH 44092, Phone: 440-347-2206, Fax: 440-347-4482, E-mail: <jdbu@lubrizol.com>

Synthetic Clean Fuels from Natural Gas and Coalbed Methane. 30 Years Progress Since First Oil Crisis

(FUEL will preprint; co-sponsored by PETR) [35 papers / 5 half-day sessions]

Devinder Mahajan, Department of Applied Science , Brookhaven National Laboratory, Upton, NY 11973; Tel: 631-344-4985, Fax: 631-344-7905, E-mail: <dmahajan@bnl.gov>; **Joe D. Allison**, Emerging Technologies Development, ConocoPhillips, 2627 Research West, 1000 South Pine Street, P.O. Box 1267, Ponca City, OK 74602-1267, USA, Tel: (580) 767-6656, Fax: (580) 767-7266, E-mail: <Joe.D.Allison@conocophillips.com>, **Qiming Zhu**, State Key Laboratory of C1 Chemical Technology, Department of Chemistry, Tsinghua University, Beijing, 100084, China, Tel: 86-10-6278-4589, Fax: 86-10-6277-0304; E-mail: <dchzqm@mail.tsinghua.edu.cn>

Reaction Pathways and Structure-Property Relationships in Fuel Chemistry [24 papers / 3 half-day sessions].

Phillip F. Britt, Oak Ridge National Laboratory, Bldg 4500N, C-26, MS-6197, P. O. Box 2008 (1 Bethel Valley Road), Oak Ridge, TN 37831, USA; Tel: 865-574-5029; Fax: 865-576-5235; E-mail: <brittpf@ornl.gov>; **A. C. Buchanan**, Oak Ridge National Laboratory, P. O. Box 2008, MS-6100, Oak Ridge, TN 37831-6100, USA, Tel: 865-576-2168; Fax: 865-574-4902; E-mail: <buchananac@ornl.gov>

Chemistry of Fuels and Emerging Fuel Technologies (Fuel-Related Research not Covered by Above Topics) [18 papers / 3 half-day sessions].

Chunshan Song, Dept. of Energy & Geo-Environ Eng, and Clean Fuels & Catalysis Program, Pennsylvania State Univ, 206 Hosler Bldg., University Park, PA 16802, Tel: 814- 863-4466; Fax: 814-865-3248; E-mail: <csong@psu.edu>

Advances in Biomass Processing and Combustion [13 papers / 2 half-day sessions].

Mark Badger, Analytical Reference Materials, Restek Corp., 110 Benner Circle, Bellefonte, PA, 16823, USA, Tel: 814-353-1300 Ext. 2355; Fax: 814-5355-2895; E-mail: <mbadger@restekcorp.com>; **Robert J. Evans**, National Bioenergy Center, National Renewable Energy Laboratory, 1617 Cole Blvd, Golden, CO 80401, USA, Tel: 303-384-6284; Fax: 303-384-6363; E-mail: <bob_evans@nrel.gov>; **Bruce Miller**, The Energy Institute, The Pennsylvania State University, C204 Coal Utilization Laboratory, University Park, PA 16802-2303, USA, Tel: 814-865-3093; Fax: 814-865-3573; E-mail: <bgm3@psu.edu>

Computer Modeling and Simulation in Fuel Chemistry and Catalysis [11 papers / 2 half-day sessions]

Jonathan P. Mathews, Department of Energy & Geo-Environmental Engineering & The Energy Institute, Pennsylvania State Univ, 151 Hosler Building, University Park, PA 16802, USA; Tel: 814-863-6213, Fax: 814-865-3248; Email: <jpm10@psu.edu>; **Linda J. Broadbelt**, Department of Chemical Engineering, Northwestern University, 2145 Sheridan Road, Evanston, IL 60208-3120; Tel: 847-491-5351; Fax: 847-491-3728; E-mail: <broadbelt@northwestern.edu>

Environmental Issues (Trace Metals, PM, PAHs) in Fossil Fuel Utilization [9 papers / 1 half-day session]

Richard Anderson, National Energy Technology Laboratory (NETL), P. O. Box 10940, Cochran Mill Road, Building 84 Room 225, Pittsburgh, PA 15236, USA; Tel: 412-386-6143; Fax: 412-386-4806; E-mail: <Richard.Anderson@netl.doe.gov>; **Curt M. White**, National Energy Technology Laboratory (NETL), P. O. Box 10940, Cochran Mill Road, Building 84 Room 225, Pittsburgh, PA 15236; Tel: 412-386-5808; E-mail: <Curt.White@netl.doe.gov>

It should be noted that the above FUEL program does not include the over 60 papers for 3 symposia co-sponsored by FUEL but scheduled in other divisions (Catal Secretariat; GeoChem; and PETR), as listed below.

List of Symposium Co-Sponsored by FUEL

Upgrading of Heavy Oils and Resids. 30 Years Progress Since First Oil Crisis. (co-sponsored with

PETR, with PETR for preprints)

Paul O'Connor, FCC Catalysts WW, Akzo Nobel Catalysts, 3800 AE Amersfoort, The Netherlands; Tel: 31-33-4676588, Fax: 31-33-4676154, E-mail: <paul.oconnor@akzonobel.com>; **Toru Takatsuka**, Technology Development, Licensing & Catalysts, Nomura Jimusho, Inc., Bussan Building Annex, 1-1-15 NishiShimbashi, Tokyo 105-0003, Japan, Tel: 81-3-3502-1469, Fax: 81-3-3502-4584, E-mail: <takatsuka@nomjim.co.jp>; **Yen Yung**, FCC Technical Marketing, Akzo Nobel Catalysts, 3800 AE Amersfoort, The Netherlands; Tel: 31-33-4676430, Fax: 31-33-4676154, E-mail: <yen.yung@akzonobel.com>;

Microreaction Technology and Process Intensification (Co-sponsored with PETR, to be

scheduled under Catal Secretariat; No preprints).
Yong Wang, Pacific Northwest National Laboratory,
Richland, WA 99352, Tel: 509-376-5117, Fax: 509-
376-5106, E-mail: <yongwang@pnl.gov>

**CO2 Sequestration: Advanced Technologies for
Predicting and Monitoring Isolation Performance**

(co-sponsored with GEOCHEM and PETR, to be
scheduled under GEOCHEM).

James W. Johnson, Geosciences and Environmental
Technologies Division, Lawrence Livermore National
Laboratory, L-221, 7000 East Ave., Livermore, CA
94550, Phone: 925-423-7352, Fax: 925-422-7438, E-
mail: <jwjohanson@llnl.gov>

NATIONAL MEETINGS, 2004



*Spring 2004
227th ACS National Meeting
March 28-April 1
Anaheim*

Semih Eser; 2004 Program Chair

Department of Energy & Geo-Environmental
Engineering, The Pennsylvania State University, 101
Hosler Building, University Park, PA 16801; (814)
863-1392, fax: (814) 865-3248, e-mail:
seser@psu.edu.

Abstracts and preprints due by November 1, 2003; on-
line submissions only.

I would like thank all the symposium organizers who
have committed their time and effort and will work hard
to make each symposium a success in the 2004 program.

I appreciate the early efforts by several organizers who
have already charted their symposia and started
recruiting tutorial speakers and other papers even for the
Fall 2004 symposia. Please submit a title of a paper, or
intention to present a paper in a particular symposium to
the symposia organizers, or the program chair.

**Advances in Analytical Characterization of Fuels and
Fuel Precursors** (Co-sponsored by the Division of
Geochemistry)

David J. Clifford, The Energy Institute, Penn State
University, 209 Academic Projects Building, University
Park, PA 16802; Phone: (814) 865-3523; Fax: (814) 865-
3573; e-mail: djc175@psu.edu

Leroy Ellis, Isotope Logging, Inc. 206 Hyde Park Drive,
Richardson, TX 75080

Ash and Slag Chemistry in Power Systems

Steven A. Benson, Energy & Environmental Research
Center, University of North Dakota, P.O. 9018, Grand

Forks, ND 58202-9018; 701-777-5177, fax: 701-777-5181, e-mail: sbenson@undeerc.org

Arun Mehta, Electric Power Research Institute, Palo Alto, CA, amehta@EPRI.com, Phone: 650 855 2895

Carbon Dioxide Capture and Sequestration

M. Mercedes Maroto-Valer, Department of Energy & Geo-Environmental Engineering and The Energy Institute, The Pennsylvania State University, 110 Hosler Building, University Park, PA 16801; (814) 863-8265, fax: (814) 865-3248, e-mail: mmm23@psu.edu

Daniel J. Fauth, National Energy Technology Laboratory, U.S. Department of Energy, P.O. Box 10940, Pittsburgh, PA 15236-0940, fauth@netl.doe.gov, Phone: 412-386-4618 (Fax 412-386-4810)

Chemistry of Solid, Liquid, and Gaseous Fuels

Semih Eser, Department of Energy & Geo-Environmental Engineering, The Pennsylvania State University, 101 Hosler Building, University Park, PA 16801; (814) 863-1392, fax: (814) 865-3248, e-mail: seser@psu.edu

Heavy Oil and Bitumen Upgrading Processes and Chemistry (Co-sponsored by the Division of Petroleum Chemistry)

Parviz, M. Rahimi, National Centre for Upgrading Technology (NCUT), 1 Oil patch Drive, Suite A202, Devon, AB T9G 1A8 Canada, e-mail: rahimi@nrcan.gc.ca, Phone: (780) 987-8708 (Fax 780-987-5349)

Frans G. A. Van den Berg, Business Group Oil Movements, Crude and Product Quality, Shell Global Solutions International BV, PO Box 38000, 1030 BN Amsterdam Netherlands, Frans.G.A.vandenBerg@opc.shell.com, Phone: +31-20-630-2463 (Fax +31-20-630-3034).

Energy Choices and the Environment

Massoud Rostam-Abadi, Illinois State Geological Survey, University of Illinois, 214 Applied Research Lab., MC 650, 615 E Peabody Dr., Champaign, IL 61820; (217) 244-4977; e-mail: massoud@isgs.uiuc.edu

Symposium Co-chair needed.

Molecular Modeling and Reaction Chemistry

Timothy A. Barckholtz, Corporate Strategic Research,

ExxonMobil Research and Engineering, 1545 Route 22 East, Annandale, NJ 08801, tim.barckholtz@exxonmobil.com, Phone: 908-730-3423 (Fax 908-730-3344)

Symposium Co-chair needed.

Multi-pollutant Control Technologies for Combustion Systems (Co-sponsored by the Committee on Environmental Improvement)

Michael Holmes, Energy & Environmental Research Center, University of North Dakota, P.O. 9018, Grand Forks, ND 58202-9018; 701-777-5276, fax: 701-777-5181, e-mail: mholmes@undeerc.org

Bruce R. Cook, Petroleum Processes Section, ExxonMobil Corporate Strategic Research, Route 22 East, Annandale, NJ 08801, bruce.r.cook@exxonmobil.com, Phone: 908-730-2583 (Fax 908-730-3198)

Utilization of Greenhouse Gases

Chang-jun Liu, State Key Lab. of C1 Chem. and Technol., Tianjin University-ABB Plasma Greenhouse Gas Chem. Lab. P.O. Box 796666, Tianjin University, Tianjin 300072, China; 86 22 27890078, fax: 86 22 27890078, e-mail: changliu@public.tpt.tj.cn

Thomas Hammer, Corporate Technology Department CT EN3, P.O. Box 3220, D-91050 Erlangen, Germany; 49-9131-7-34870, fax: 49-9131-7-24709, e-mail: Thomas.Hammer@erls.siemens.de

Richard Mallinson, Institute for Gas Utilization Technologies, The University of Oklahoma, 100 E. Boyd, EC T335, Norman, OK 73019; 405 325 4378, fax: 405 325 5813, e-mail: mallinson@ou.edu



*Fall 2004
228th ACS National
Meeting
August 22-26
Philadelphia*

Semih Eser; 2004 Program Chair

Department of Energy & Geo-Environmental Engineering, The Pennsylvania State University, 101 Hosler Building, University Park, PA 16801; (814) 863-1392, fax: (814) 865-3248, e-mail: seser@psu.edu.

Abstracts and preprints due by November 1, 2003; on-line submissions only.

Carbon Materials and Organic Chemicals from Coal

John Andréson, The Energy Institute, The Pennsylvania State University, 221 Academic Projects Building, University Park, PA 16802, e-mail: jma13@psu.edu, Phone: 814-865-2484 (Fax 814-865-3573)

Kouichi Miura, Department of Chemical Engineering, Kyoto University, Kyoto 606-8501 Japan, miura@cheme.kyoto-u.ac.jp, Phone: -81-75-753-5578 (Fax -81-75-753-5909);

John W. Zondlo, Department of Chemical Engineering, College of Engineering and Mineral Resources, P.O. Box 6102, Morgantown, WV 26506-6102, e-mail: jzondlo@wvu.edu, Phone: 304-293-2111 x2409

Characterization, Upgrading, and Utilization of Heavy Hydrocarbon Resources (Co-sponsored by the Division of Petroleum Chemistry)

Parviz, M. Rahimi, National Centre for Upgrading Technology (NCUT), 1 Oil patch Drive, Suite A202, Devon, AB T9G 1A8 Canada, e-mail: rahimi@nrcan.gc.ca, Phone: (780) 987-8708 (Fax 780-987-5349)

Refa Koseoglu, Saudi Aramco, P.O. Box 8560, Dhahran 31311 Saudi Arabia, e-mail: koseogor@aramco.com.sa, Phone: 966-3-872-3770 (Fax 966-3-872-3931)

Chemistry and Applications of Carbon Nanotubes and Nanoparticles

Bhabendra K. Pradhan, Columbian Chemicals Company, 1800 West Oak Commons Ct, Marietta, GA 30062-2253, e-mail: bpradhan@phelpsd.com, Phone: 770-792-9460 (Fax 770-792-9631)

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Chemistry of Coke and Carbon Deposition in Fuel Systems

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Semih Eser, Department of Energy & Geo-Environmental Engineering, The Pennsylvania State University, 101 Hosler Building, University Park, PA 16801; (814) 863-1392, fax: (814) 865-3248, e-mail: seser@psu.edu

Chemistry of Renewable Fuels and Chemicals

Phillip F. Britt, Chemical Sciences Division, Oak Ridge National Laboratory, Building 4500N, MS-6197, P.O. Box 2008, Oak Ridge, TN 37831-6197, e-mail: brittpf@ornl.gov, Phone: 865-574-5029 (Fax 865-576-5235)

Robert Evans, National Renewable Energy Laboratory, 1617 Cole Boulevard, Golden, CO 80401-3393, e-mail: bob_evans@nrel.gov, Phone: 303-384-6284 (Fax 303-384-6363)

Chemistry of Solid, Liquid, and Gaseous Fuels

Semih Eser, Department of Energy & Geo-Environmental Engineering, The Pennsylvania State University, 101 Hosler Building, University Park, PA 16801; (814) 863-1392, fax: (814) 865-3248, e-mail: seser@psu.edu

Fuel Cell Chemistry and Operation (Co-sponsored by the Division of Polymeric Materials: Science & Engineering)

Ying She, United Technologies Research Center, 411 Silver Lane, MS 129-30, East Hartford, CT 06108, e-mail: shey@utrc.utc.com, Phone: 860-610-7070 (Fax 860-610-7669)

Andrew M. Herring, Department of Chemical Engineering, Colorado School of Mines, Golden, CO 80401, e-mail: aherring@mines.edu, Phone: 303-384-

2082 (Fax 303-273-3730)

John A. Turner, The Center for Basic Sciences,
National Renewable Energy Laboratory, Golden, CO
80401, e-mail: jturner@nrel.gov

Hydrogen Production, Separation, and Storage

(Co-sponsored by the Division of Petroleum Chemistry)

James R. Brenner, Department of Chemical Engineering, Florida Tech, 150 West University Blvd., 210 Olin Engineering Bldg, Melbourne, FL 32901, e-mail: jbrenner@fit.edu, Phone: 321-674-7560 (Fax 321-674-7565)

Teclé S. Rufael, Upstream Technology, Texaco Inc, 4800 Fournace Pl, Bellaire, TX 77401, e-mail: rufaets@texaco.com, Phone: 713-432-2589 (Fax 713-432-6908)

Anand S. Chellappa, MesoSystems Technology, Inc, 2425 Ridgecrest Dr. SE, Albuquerque, NM 87108, e-mail: achellappa@mesosystems.com, Phone: 505-348-9188 (Fax 505-348-9177)

Ultraclean Transportation Fuels (Co-sponsored by the division of Petroleum Chemistry)

Uday T. Turaga, Phillips Petroleum Company, 92-E, Phillips Research Center, Bartlesville, OK 74004, e-mail: utturag@ppco.com, Phone: 918-661-0113 (Fax: 918-662-1115)

Noritatsu Tsubaki, Department of Material System and Life Science, School of Engineering, Toyama University, Gofuku 3190, Toyama 930-8555 Japan

Chunshan Song, The Energy Institute and Department of Energy and Geo-Environmental Engineering, The Pennsylvania State University, 209 Academic Projects Building, University Park, State College, PA 16802, e-mail: csong@psu.edu, Phone: 814-865 3573 (Fax 814-865 3248)



Spring 2005
229th ACS National Meeting
March 13-17
San Diego

Tom Autrey; 2005 Program Chair

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Online submission of abstract (150 word) and preprint paper (2-pages) via ACS website
<http://oasys.acs.org/oasys.htm>
Instructions for preprint papers and submission deadlines available on-line at
<http://www.anl.gov/PCS/acsfuel/>

Computational Methods and Modeling in Fuel Chemistry

Anne Chaka NIST anne.chaka@nist.gov
Charles Taylor NETL

Methods and Techniques in Analytical Characterization for Fuel Science

Kirk Michalian (NRC Alberta)
michaeli@nrcan.gc.ca (780) 987-8646
Randall Winans (Argonne National Laboratory)

Advances in CO₂ Conversion and Utilization

Philip Jessop (University of Toronto)
John Linehan (PNNL)

Catalysis in Fuel Chemistry

Heterogeneous Catalysis (NO_x Chemistry)
Chuck Peden (PNNL)

Removal of Heteroatoms HDS & HDN

Symposium Chairs Needed

Catalyst Fouling Carbon formation on catalysts

Symposium Chairs Needed

Advances in C1 Chemistry

Don Camaioni (PNNL)

Monitoring and Control of Air Toxics and Fine Particulate Matter (PM2.5)

Frank Huggins (University of Kentucky)

Environmental Issues in Fuel Utilization (trace metals, PAHs)

Symposium Chairs Needed

Conversion of Biomass to Fuels

Symposium Chairs Needed

Gas Hydrates

Symposium Chairs Needed

Chemistry of Renewable Fuels and Chemicals

Symposium Chairs Needed



*Spring 2005
230th ACS National Meeting
Aug 28-Sept 1
Washington D.C.*

Hydrotreating/Hydrocracking Technologies: Status and Future challenges

Omer Refa Koseoglu (Saudi Aramco, Research & Development Center)

Hydrogen Energy, Production and Storage

Ali Raissi (Florida Solar)
Reg Penner (Cal State Irvine)

Fuel Cells

BioFuel Cells

Eugenii Katz (Hebrew University)
Stuart Wilkinson (University of South Florida)

Inorganic Fuel Cells

John Darab (MEI) (908) 782-5800
Jerry Lin (University Cincinnati)

Polymeric Fuel Cells

Peter Pintauro (CWRU)

Fuel Processing for Fuel Cell Research

Yong Wang (PNNL)

Advances in Membranes for Energy and Fuel Applications

Benny Freeman (University Texas)

Separation Science & Technology for Fuel Applications (Gas, Light Distillates, Diesel Fuels,

and Additives)

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**Characterizations and Mechanisms in Soot
Formation**

Symposium Chairs Needed

Reaction Pathways in Fuel Processing

Symposium Chairs Needed

Ultraclean Transportation Fuels

Symposium Chairs Needed